

MX7

Hand-Held Computer

Microsoft® Windows® CE 5 Operating System

Cradle Reference Guide

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Vehicle Power Supply Connection Safety Statement

Vehicle Power Supply Connection: If the supply connection is made directly to the battery, a 10 A slow-blow fuse should be installed in the positive lead within 5 inches (12.7 cm.) of the battery positive (+) terminal. (US)

Raccordement de l'alimentation du véhicule Si l'alimentation est raccordée directement à la batterie, un fusible à action retardée de 10 A doit être installé sur le câble positif à moins de 12,7 cm de la borne positive (+) de la batterie. (FR)

EL forsyning af køretøjet. Er forsyningsforbindelsen direkte tilknyttet til batteriet og og tilsluttet til den positive part indenfor 12,7 cm (+ delen). vil der være en langsom tændelse af 10 ampere. (DK)

Kytchentä ajoneuvon virtalähteeseen Jos virtaa otetaan suoraan akusta, 10 ampeerin hidas sulake on asennettava positiiviseen johtoon enintään 12 cm:n etäisyydelle akun positiivisesta (+) navasta. (FI)

Anschluss an Fahrzeugbatterie Bei direktem Anschluss an die Fahrzeugbatterie sollte eine träge 10A-Sicherung in die positive Leitung zwischengeschaltet werden, und zwar nicht weiter als ca. 13 cm von der positiven (+) Batterieklemme entfernt. (DE)

Σύνδεση Τροφοδοτικού Ισχύος Οχήματος Αν η σύνδεση του τροφοδοτικού γίνει κατευθείαν στη μπαταρία, μια ασφάλεια βραδείας τήξης των 10Α θα πρέπει να τοποθετηθεί στο θετικό καλώδιο εντός 5 ιντσών (12,7 εκ.) του θετικού (+) ακροδέκτη της μπαταρίας. (GR)

Collegamento dell'alimentazione del veicolo Se il collegamento dell'alimentazione viene stabilito direttamente con la batteria, è necessario installare un fusibile ad azione lenta da 10 A nel conduttore positivo a meno di 5 in. (12,7 cm) dal terminale positivo (+) della batteria. (IT)

Tilkople strømforsyningen til kjøretøyet Hvis strømforsyningen koples direkte til batteriet, skal det installeres en 10 A treg sikring i den positive ledningen innen 12,7 cm fra plusspolen (+) på batteriet. (NO)

Ligação do fornecimento de corrente do veículo Se a ligação de fornecimento de corrente for ligada directamente à bateria, deve instalar-se um fusível de 10A no terminal positivo, a 12,7 cm. do terminal positivo (+) da bateria. (PT)

Conexión de suministro eléctrico para el vehículo Si el suministro eléctrico se proporciona directamente a la batería, se debe instalar un fusible de retardo de 10 A en el conductor positivo, como máximo a 12,7 cm (5 pulgadas) del terminal positivo (+). (ES)

Fordonets strömförsörjningskoppling Om strömkopplingen görs direkt till batteriet, måste en 10A-säkring installeras i den positivt laddade ledningen inom 12.7 cm från batteriets pluspol (+). (SE)

Taşıt Güç Kaynağı Bağlantısı Kaynak bağlantısı doğrudan aküye yapılırsa, pozitif bağlantı kablosu üzerinde akünün pozitif (+) kutbuna 12.7 cm mesafede 10A'lık yavaş atan bir sigorta monte edilmelidir. (TR)

Legend: Danish – DK; English – US; Finnish – FI; French- - FR; German – DE; Greek – GR; Italian – IT; Norwegian – NO; Portuguese – PT; Spanish – ES; Swedish – SE; Turkish – TR.

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Chapter 1: Introduction

The MX7 is a rugged, portable, hand-held computer with a Microsoft® Windows® CE 5 operating system. There are three optional cradles available for the MX7:

- A [desktop cradle](#) that secures the MX7, recharges batteries and enables communications between the MX7 and another device.
- A [passive vehicle-mount cradle](#) that secures the MX7 and isolates it from shock and vibration.
- A [powered vehicle-mount cradle](#) that secures the MX7, isolates it from shock and vibration and recharges the battery.

About This Guide

This MX7 Cradle Reference Guide provides instruction for the end-user, installer or system administrator to follow when setting up or using an MX7 cradle.

Chapter 2: Desktop Cradle

Unpacking Your Desktop Cradle

After you open the shipping carton containing the product, take the following steps:

- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.
- Make sure the items in the carton match your order.
- Save the shipping container for later storage or shipping.

The MX7 cradle is available in three configurations:

- Without a power supply. A power supply must be ordered separately.
- With a power supply and a US power cord.
- With a power supply but without a power cord. A country specific power cord must be provided.

Communications cables for the MX7 are available separately.

Overview

The MX7 desktop cradle restrains the MX7, re-charges batteries, and enables serial, audio or USB communication with a PC, scanner, printer or other peripheral device. MX7 keypad data entries can be mixed with cradle-tethered scanner bar code data entries while the MX7 is in a powered cradle. Bluetooth device connection and use, while the MX7 is docked, are managed by the MX7 Bluetooth program, not the cradle.

Using a wall AC adapter the desktop cradle can also recharge a spare MX7 battery in approximately 4 hours. The MX7 battery recharging is managed by the docked MX7 power management configuration. The MX7 can be either On or in Suspend Mode while in the cradle. Special purpose and power cables are available from Honeywell.

Wireless host/client communications can occur whether the cradle is receiving external power or not as wireless functions draw power from the main battery in the MX7.

The MX7 cradle is not certified for use in Hazardous Locations.

Preparing the Cradle for Use

Note: Keep dirt and foreign objects out of the cradle. Do not short circuit any of the charging terminals (pins), as this action could result in injury or property damage.

Honeywell recommends a stable, horizontal surface out of the way of:

- inclement weather conditions,
- extremely high concentrations of dust or wind blown debris,
- accidental knocks, bumps or other shocks to the cradle and items in the cradle bays.
- Leave enough space at cable connectors to ensure cables are protected from jostling, tugging or being disconnected by passing objects.

Note: The MX7 must have a main battery installed when it is docked in a cradle.

The main battery in the MX7 is recharged when the MX7 is docked in a powered desktop cradle and when it is docked in a powered vehicle cradle.

Quick Start - Desktop Cradle

The following list outlines, in a general way, the process to follow when preparing the MX7 desktop cradle for use. Refer to the following sections in this document for more details.

1. Refer to [Install / Remove Desktop Cradle Adapter Cup](#).
2. Connect the cradle end of the power adapter cable to the Power port on the back of the cradle.
3. Attach the AC power connector to a dependable power source.
4. Attach any desired external cabled devices to the ports on the cradle.
5. The desktop cradle is ready for use.

Battery Charging in a Desktop Cradle

The MX7 main battery recharging is managed by the Power Management settings in the MX7.

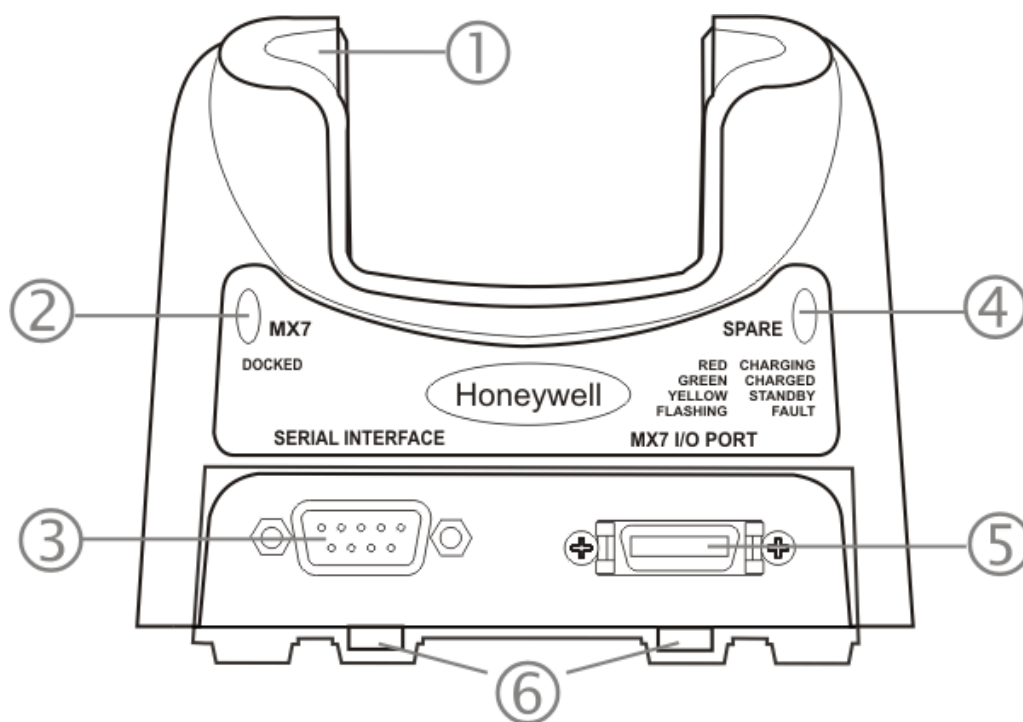
Refer to **Start > Settings > Control Panel > Power** on the MX7.

The spare battery in the spare battery well re-charges with or without an MX7 in the dock. The spare battery is fully charged in approximately four hours.

The cradle must be receiving power from an external power source before the main battery in the docked MX7 or spare battery pack charging can take place.

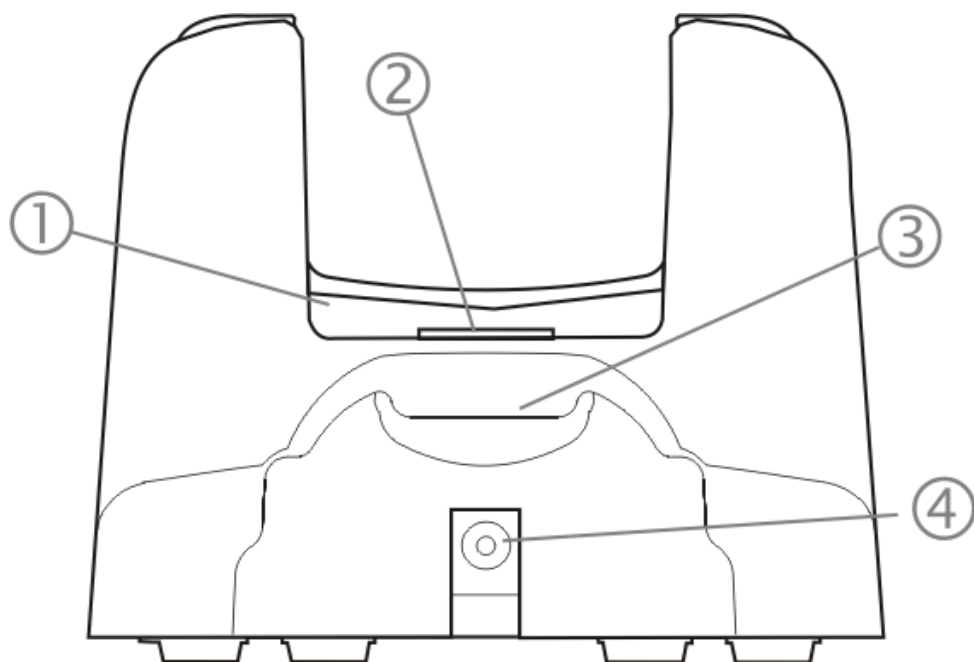
Components

Front

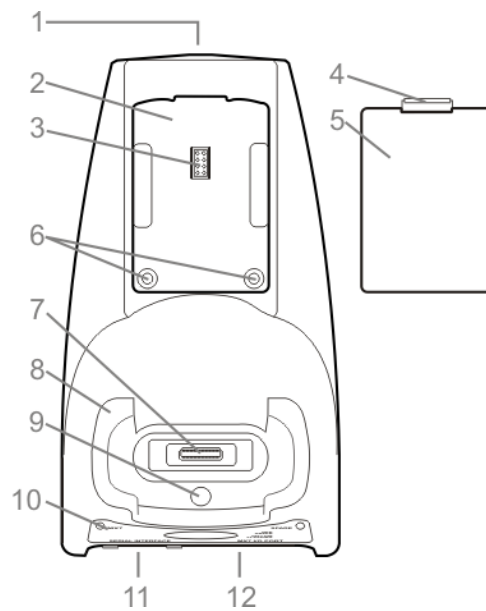


1. Charging Pocket Adapter Cup
2. MX7 Docked LED
3. Serial Interface Connector
4. Spare Battery LED
5. I/O Connector
6. Table Mounting Hole Guides

Back

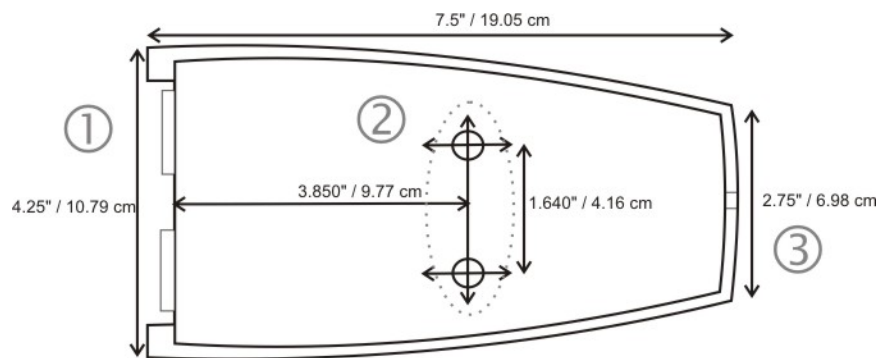


1. Charging Pocket Adapter Cup
2. Cradle Connector
3. Spare Battery Charging Bay
4. Power Connector



1	Power Supply Connector
2	Spare Battery Charging Bay
3	Spare Battery Charging Terminals
4	Spare Battery Latch
5	Spare Battery
6	Table Mounting Holes
7	Cradle Connector
8	Docking Bay Adapter Cup
9	Docking Bay Adapter Cup Mounting Hole
10	Desktop Cradle Label
11	Serial Interface Connector
12	I/O Connector

Desktop Mounting Footprint



Not to Scale

1	Front
2	Table Mounting Hole Guides
3	Back

Bolts, washers, screws, screwdriver or wrench needed when attaching the MX7 desktop cradle to a protected flat surface are not supplied by Honeywell.

Periodically check the table mounting hardware and re-tighten if necessary. Table mounting hardware can be finger-tightened.

Note: Do not over-tighten the table mounting hardware. If the cradle is cracked, it must be replaced before being placed into service. Contact [Technical Assistance](#) for help.

Install / Remove MX7 Docking Bay Adapter Cup

Equipment Required – Phillips screwdriver and torquing tool (not supplied by Honeywell). You will need a torquing tool capable of torquing up to 6 (+/- .5) in/lb. Honeywell recommends using a clean, well-lit stable surface.

The desktop cradle is shipped with the docking bay adapter cup pre-installed. If the MX7 has a rubber boot, the docking bay adapter cup must be **removed** before the MX7 is placed in the desktop cradle.

The desktop cradle can dock an MX7 with a rubber boot (MX7490BOOT or MX7491BOOT) enclosing/protecting the mobile device.

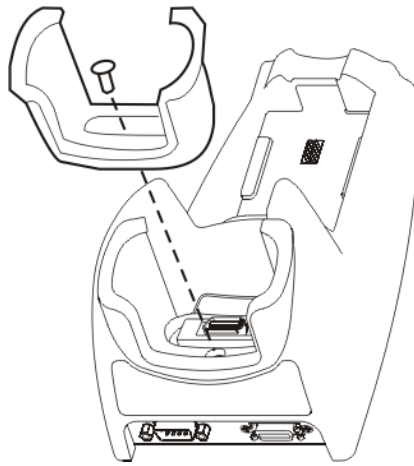
Before docking an MX7 without a rubber boot in the cradle, re-**install** the docking bay adapter cup.

Install

The adapter cup is installed facing in one direction. Put the adapter cup in the MX7 docking bay, aligning the screw hole in the adapter cup with the screw hole in the MX7 docking bay.

Using a torquing screwdriver, insert the screw in the adapter cup screw hole, and torque the screw to 6 in/lbs +/- .5 in/lbs.

Periodically check the connection of the adapter cup and re-torque if necessary.



Remove

Remove the adapter cup by unscrewing the single captive screw at the front of the adapter cup.

Place both the adapter cup and the screw in a protected, safe area until needed.

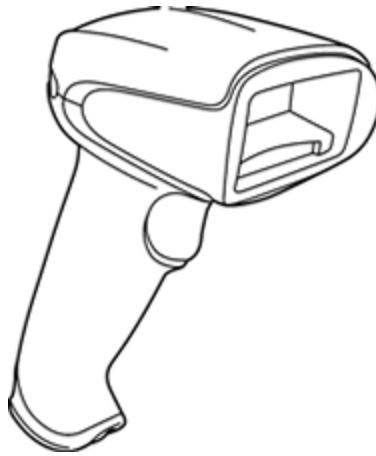
Tethered Scanners and the MX7 Cradles

An MX7 powered cradle supports tethered scanner attachment. A powered cradle provides 5V power to a tethered scanner. The MX7 passive vehicle cradle cannot support tethered scanner attachment.

Note: Pressing an MX7 Scan button has no effect on tethered bar code scanners connected to a powered desktop cradle. Tethered scanners read bar code scans only when the trigger on the tethered scanner is pressed.

A tethered scanner can be connected to the 9-pin RS232 Serial Interface port on the desktop cradle or to the Serial Interface port on the back of the vehicle cradle.

MX7 keypad data entries can be mixed with tethered scanner bar code data entries. Any tethered scanner that decodes the bar code internally and outputs an RS232 data stream may be used. It sends the data to the MX7 in ASCII format.



Tethered scanners send scanned data to the MX7 when the MX7 is in a powered cradle and the scanners are connected to the Serial Interface port on the cradle.

When a tethered scanner is connected to the Serial Interface port on a powered cradle, the MX7 must be configured as follows:

Start > Settings > Control Panel > Scanner > Main > either Port 1, Port 2 or Port 3

Select **Port 2**. Port 1 (COM1) is reserved for Bluetooth scanner connections.

There is no software in the desktop cradle.

Bluetooth device connection and use, while the MX7 is docked, are managed by the MX7 Bluetooth client, not the cradle.

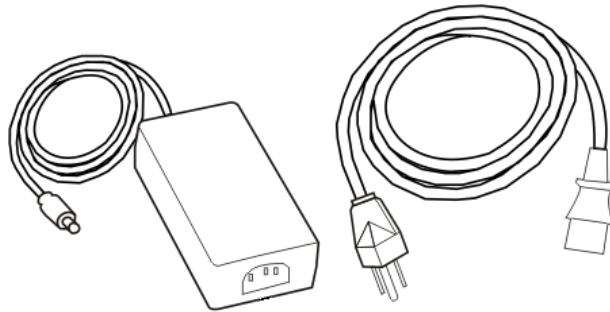
Note: The cradle must be powered by an external power source to enable tethered scanner use.

Assemble/Attach the AC Power Adapter

Note: Connect the cable to the cradle first, then to an AC source.

The external Power Supply for the cradle is shipped with the cradle. Contact [Technical Assistance](#) if there is no AC cable.

The Power connector is located on the back of the cradle.

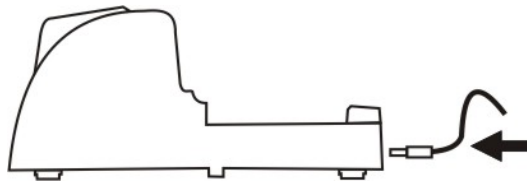


Plug the AC power plug into any AC wall outlet with a dependable power source.

Firmly press the adapter end of the power cable into the 3 pin connector on the power adapter.

Firmly press the cradle end of the power cable into the single connector on the back of the cradle.

AC power is now being supplied to the AC power adapter and the cradle.



Connect Input/Output Cables

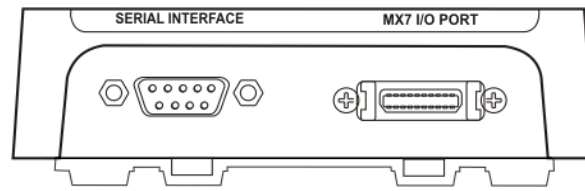
Note: Route all cables to ensure they are protected from jostling, tugging or being disconnected by passing objects.

The cradle must be receiving power from an external power source before MX7 battery charging can begin.

Attach a Serial or I/O Connector

The serial cable is connected to the port labeled **Serial Interface** on the left front of the desktop cradle.

The serial cable end can originate with a tethered scanner, a desktop/laptop PC, a printer or another serial device.



The I/O connector cable is connected to the port (male) labeled **MX7 I/O Port** on the right front of the desktop cradle.

Periodically test the connections for stability and re-tighten if necessary.

Serial Cable

Align the RS232 serial cable end (female) carefully to the **Serial Interface** port (male) on the left front of the desktop cradle.

Press the ends together and finger tighten the screws on either side of the connector. Test the connection for stability.

I/O Cable

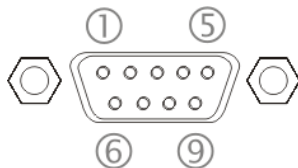
Squeeze the clips next to the connector attached to the cable to open the catches in the connector assembly. Firmly press the cable end (female) into the MX7 I/O Port connector (male) on the front of the cradle. Release the clips in the connector cable.

Test the connection for stability.

Pinout - RS232 Connector

Note: Tethered scanners must be connected to powered cradles.

The connector is industry-standard RS232 and is a PC/AT standard 9-pin D male connector.



Pin	Signal	Description
1	DCD	Data Carrier Detect
2	RXD	Received Data – Input
3	TXD	Transmitted Data – Output
4	DTR	Data Terminal Ready
5	GND	Signal/Power Ground
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear To Send
9	RI or Power	+5 VDC sourced by the Cradle

Note: Pin 9 of this port is connected to +5 VDC. Only approved cables are to be used for communication between the cradle and external devices.

Cradle LEDs

When the desktop cradle AC/DC power supply cable begins to supply power to the cradle, the cradle LEDs flash yellow, red, green for three seconds then turn off. The cradle is ready for use.



Docked LED

When Docked LED is ...	It means
Off	MX7 not inserted or no power applied
Red	MX7 docked and power applied.

The cradle must be connected to a power source.

Spare Battery LED

When Spare LED is ...	It means
Off	Battery pack not inserted or no power applied
Green	Battery pack fully charged
Red	Battery pack charging
Yellow / Amber	Battery pack temperature out of range
Flashing Red	Battery pack fault or failure

Note: The cradle must be connected to AC power. Spare battery charging does not require an MX7 be docked in the docking bay.

MX7 Mobile Device System Status LED

The MX7 System Status LED is located at the top of the keypad.

When the LED is . . .	The Status is . . .	Comment
Blinking Red	Power Fail	Replace the main battery with a fully charged main battery. Or Connect the MX7 to external AC power to allow the internal charger to charge the main battery e.g., dock in a powered cradle.
Steady Red	Main Battery Low	Low Battery Warning. Replace the main battery with a fully charged main battery. Or dock the MX7 in a powered cradle.
Blinking Green	Display Off	No user intervention required.
No Color	Good	No user intervention required.

Docking and Undocking the MX7

Refer to the previous section titled [Install / Remove Docking Bay Adapter Cup](#).

When the MX7 is in Suspend Mode it wakes up when it is docked in a powered cradle. There is no change in mode state settings or behavior when the MX7 is docked in a cradle without a power source.

MX7 mode states while the MX7 is in a powered cradle e.g., suspend, resume, display backlight, etc., are managed by the MX7 OS Power settings.

If the cradle is not permanently attached to the work surface, stabilize the cradle with one hand while inserting or removing the MX7 with the other hand.

The MX7 is inserted into the charging pocket with the keypad facing forward.

Dock the MX7

Remove any cables attached to the base of the MX7.

Carefully press the MX7 straight down into the docking bay until the multi-pin connector at the base of the MX7 clicks into place with the multi-pin charging/communication connector at the bottom of the docking bay. The MX7 cradle is designed to secure the MX7 facing front.

The cradle's Docked LED illuminates.

Undock the MX7

Remove the MX7 from the cradle by pulling it straight up and out of the docking bay. If necessary, brace the cradle with one hand while the other hand removes the MX7.

The cradle's Docked LED turns Off.

Insert / Remove a Spare Battery

Prerequisites: The steps outlined in [Assemble/Attach the AC Power Adapter](#) have been completed and the cradle has a dependable power source. The cradle has been bolted to a stable surface, if required.

Note: *Do not drop or slam the spare battery into the charging pocket. Damage may result.*

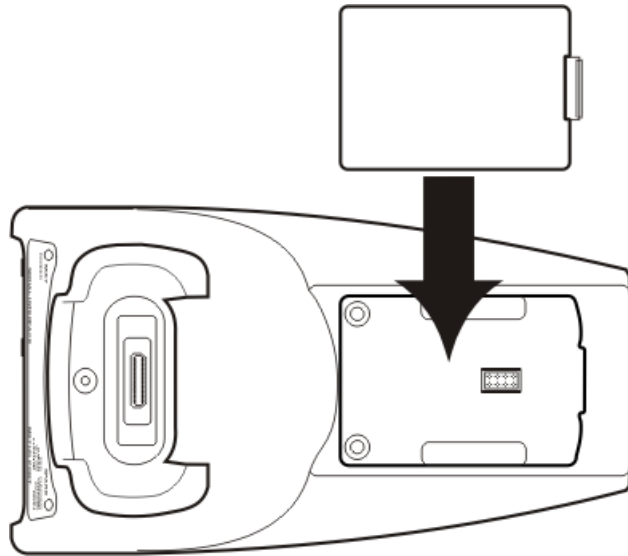
A fully depleted spare battery recharges in approximately four hours in the MX7 powered cradle. Charging time may take longer if a tethered scanner, connected to the Serial port and drawing power from the cradle, is used.

The spare battery well is molded in the shape of the MX7 main battery. The spare battery can be inserted in the battery well in only one direction.

When there is an MX7, with or without a handle, docked in the cradle, a spare battery can still be inserted in the charging bay.

You do not need to undock the MX7 before inserting or removing a Spare battery.

Stabilize the cradle with one hand when inserting/removing the Spare battery, if necessary.



Insert Spare Battery

Hold the battery with the charging terminals facing down, toward the charging pocket.

Tilt the end (without the latch) of the spare battery pack into the upper end of the battery charging pocket, and firmly press down on the other end (with the latch) until the battery is fully inserted into the battery well.

Push down on the spare battery until the catch clicks into place, securing the spare battery in the battery bay. This will ensure the charging contacts on the spare battery connect with the re-charging contacts in the battery bay.

The Spare charging bay LED illuminates.

Remove Spare Battery

A green Spare battery LED signifies the spare battery is charged.

Remove the Spare battery by sliding the latch in and pulling the Spare battery up, with a hinging motion, and out of the charging bay.

The Spare charging bay LED turns Off.

MX7 Desktop Cradle Help

The following is intended as an aid in determining whether the MX7 battery pack or the cradle battery charger may be malfunctioning.

Problem	Cause	Solution
Battery pack does not fit in battery well.	Different manufacturer's battery pack, or there is an object in the battery well.	Check if the battery pack is Honeywell part number MX7A380BATT / MX7392BATT or a Low Temperature (CS) Battery : MX7A381BATT / MX7393BATT / MX7396BATTERY . If not, do not use. Remove the object from the battery well.
No battery pack in spare battery charging well, but the charging LED is on.	Dirt or foreign objects are in the battery well.	Unplug cradle from outlet. Remove any dirt or foreign objects from battery well. If the LED continues to stay ON, the cradle may be defective. Return charger to an authorized Honeywell service center.
Cradle is plugged into a live outlet, battery pack is inserted, but RED LED is OFF and no other LEDs are on, or all LEDs are off.	Battery pack is not making contact with charging terminals in the battery well. Faulty battery pack. New battery pack, same result.	Push battery pack in firmly. Do not "slam" the battery pack into the battery well. Replace battery pack. Contact Honeywell for replacement options.
When you first put a fully charged battery pack in the battery well, the RED LED comes on, indicating the battery pack is charging.	During the first few minutes, the charger checks the battery pack for correct voltage and charge state. During this time the LED is RED and is continuously ON. After charging is complete, the LED is GREEN.	There is nothing wrong with the battery pack or charging pocket.
LED is flashing RED at any station. LED is flashing RED at any station.	Current could not be sourced through the battery pack due to age, exhaustion or damage to the cell(s). Or The battery pack does not communicate with the charger.	Contact Honeywell for battery pack replacement options.
	The charger's timeout period has expired.	Make sure that the battery pack temperature is within specification and retry charging. If problem repeats, contact Honeywell for battery pack replacement options.
Solid YELLOW LED when battery pack is inserted in the cradle.	The battery pack is too hot or too cold to charge.	Remove battery pack from the cradle and allow it to adjust to room temperature. If the battery pack is left in the cradle, it will cool down or warm to a temperature upon which the cradle will begin the charge cycle. However, depending on the

Problem	Cause	Solution
		temperature of the MX7 battery, it may take 2-3 hours to adjust. The battery pack can cool down faster if the battery is not in the battery well.
MX7 docked in cradle but cannot work with accessory cables connected to cradle.	MX7 not fully seated in cradle Foreign objects inside docking bay or cable connectors	Reseat the MX7 fully into the docking bay. Remove the foreign objects and reseat the MX7 into the docking bay.
MX7 docked in cradle but Docked LED does not light up.	MX7 not fully docked. Power supply not connected.	Check the docking bay is clear of foreign objects and reseat the MX7 fully into the docking bay. Check that power is applied to the Power Jack at the rear of the MX7 Desktop Cradle.

Maintenance

Inspect the rubber feet and replace them if missing, broken or cracked. Check the cradle regularly for excessive wear at pressure points. If the cradle is mounted to a stable surface, check surface mounting connections periodically and re-tighten as necessary.

If the cradle becomes cracked or broken at any time, it must be taken out of service and replaced. Contact [Technical Assistance](#) for a replacement cradle.

There are no serviceable parts in the desktop cradle. Do not attempt to open the unit.

Cleaning

Do not use paper towels or harsh-chemical-based cleaning fluids since they may result in damage to the surfaces and/or battery charging terminals (pins).

Use a clean soft cloth to wipe any dirt, moisture or grease from the MX7, spare battery packs, charging contacts (pins) or the cradle.

Do not use any liquid to clean the battery pack, MX7, cradle, or charging pockets. Spray or dampen the cleaning cloth with liquids/sprays. If possible, clean only those areas which are soiled.

Lint/particulates can be removed from the connectors, charging terminals and charging/docking pockets with clean, filtered canned air.

Technical Specifications – Desktop Cradle

Note: Do not store MX7 batteries above 140°F (60°C) for extended periods.

Weight	18 oz / 500 grams
Dimensions	H 3.5 in x W 4.25 in x L 7.5 in
Temperature	
Operating	32° F to 104° F / 0° C to 40° C (charger On, no charging in progress)
Charging	50° F to 104° F / 10° C to 40° C (spare battery charger is charging)
Storage	-4° F to 158° F / -20° C to 70° C
Humidity	5% to 90% (non-condensing) at 104° F / 40° C
IEC 60529	Compliant to IP40
Ports	Power, MX7 I/O and serial port

Chapter 3: Passive Vehicle Mount Cradle

Unpacking Your Passive Vehicle Mount Cradle

After you open the shipping carton containing the product, take the following steps:

- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.
- Make sure the items in the carton match your order.
- Save the shipping container for later storage or shipping.

The MX7 passive vehicle cradle consists of:

- Cradle bracket
- U-bracket
- 2 knobs
- Hook and loop fabric to secure the MX7

An optional RAM assembly consists of:

- RAM ball base for vehicle mount
- RAM arm
- RAM base to attach U-bracket
- 4 each: bolts, nuts and washers

The installer must supply hardware to attach either the U-bracket or the RAM ball base to the vehicle.

Communications cables for the MX7 are available separately.

Overview

The MX7 passive vehicle mount cradle restrains the MX7.

Wireless communication is available as long as the mobile device has sufficient energy in the main battery pack and a clear signal path.

The passive vehicle cradle is lined with strips of hook-and-loop fabric to ensure a snug fit between the MX7 and the inside of the cradle.

The cradle can secure an MX7 with or without a trigger or handstrap.

The MX7 passive vehicle cradle does not have power, MX7 serial or input/output connectors.

There are two mounting options for the cradle:

- [U-bracket mounting](#)
- [RAM ball Arm mounting](#)

Note: Do not put the MX7 into the cradle until the cradle is securely fastened to the surface.

Preparing the Passive Vehicle Cradle for Use

The passive vehicle mounted cradle should be mounted in an area in the vehicle where it:

- Does not obstruct the driver's vision or safe vehicle operation .
- Will be protected from rain or inclement weather.
- Will be protected from extremely high concentrations of dust or wind-blown debris.
- Can be easily accessed by a user seated in the driver's seat while the vehicle is not in operation.

Quick Start

The following list outlines, in a general way, the process to follow when preparing the MX7 passive vehicle cradle for use. Refer to the following sections in this document for more details.

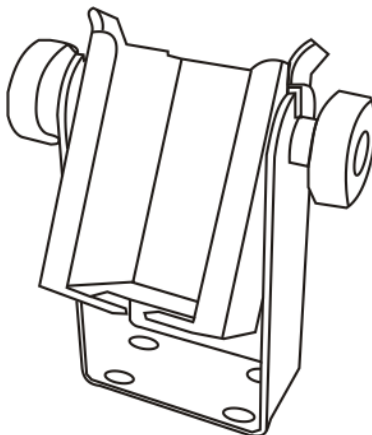
1. Attach the [RAM bracket](#) or [U-bracket](#) mounting device to the vehicle.
2. Attach the MX7 passive cradle to the vehicle mounted bracket using the Angle Adjust knobs.
3. Adjust the cradle to the best viewing angle using the Angle Adjust knobs.
4. The Passive Vehicle Mount cradle is ready for use.

Components

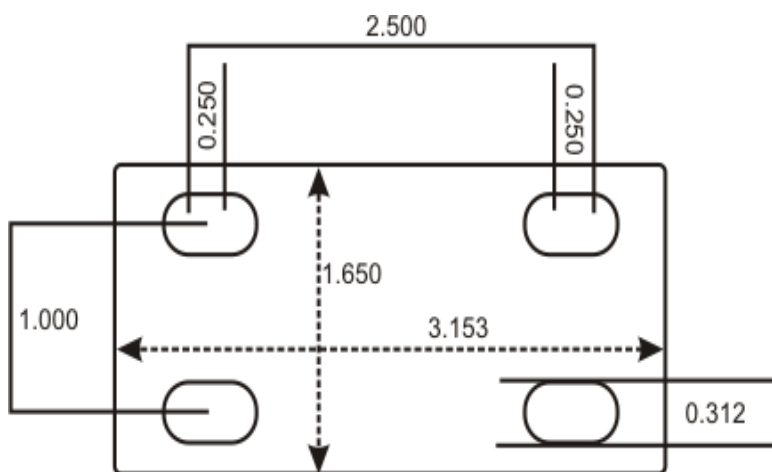
Note: Bolts, washers, and wrench needed when attaching the MX7 to the vehicle are not supplied by Honeywell.

Passive Vehicle Mount Cradle and U-Bracket, Assembled

*Note: Honeywell does not supply the bolts or washers needed when mounting the cradle assembly to the vehicle chassis.
Use bolts with a maximum 10/32" (0.3125) diameter*



U-Bracket Footprint

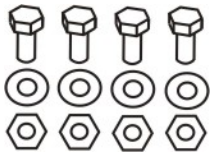
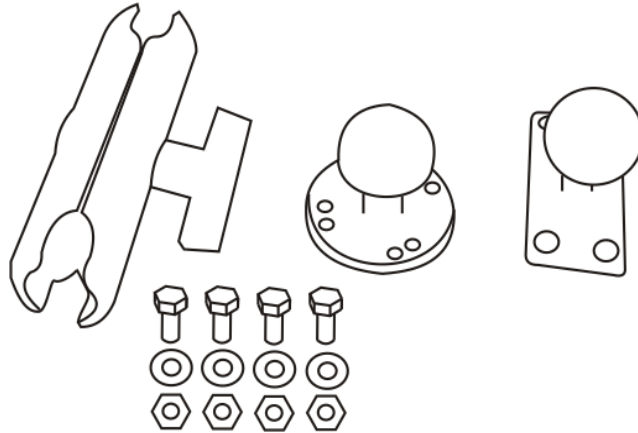


Passive Cradle and RAM Ball and Arm, Assembled

Note: Honeywell does not supply the bolts or washers needed when mounting the cradle assembly to the vehicle chassis.
Use bolts with a maximum 10/32" (0.3125) diameter.

See Also: ["Components"](#)

RAM Assembly Components



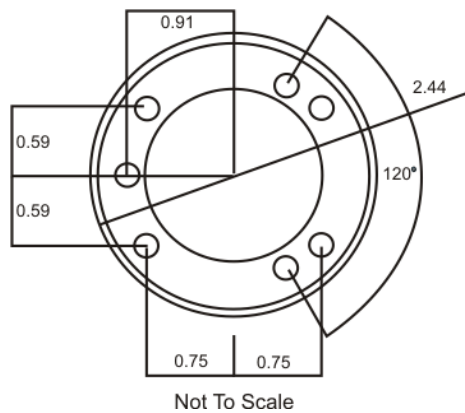
Mount the cradle U-bracket to the upper RAM ball assembly with the bolts, washers and nuts supplied by Honeywell.

Qty 4 – Hex Cap 1/4-20 x 3/4 bolts

Qty 4 – 1/4 flat washer

Qty 4 – 1/4-20 nylon insert lock nuts

RAM Assembly Footprint

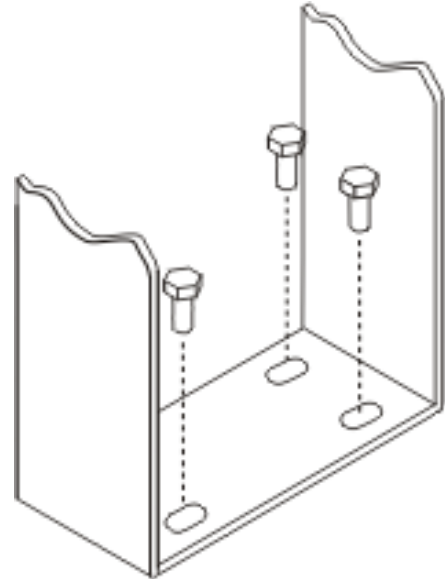


Install the Cradle U-Bracket

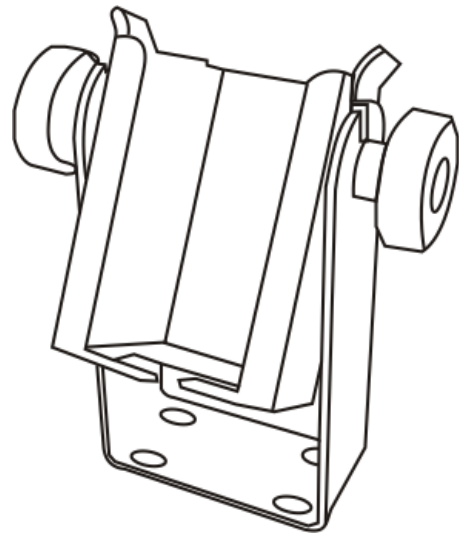
*Note: Honeywell does not supply the bolts or washers needed when mounting the cradle assembly to the vehicle chassis.
Use bolts with a maximum 10/32" (0.3125) diameter.*

See Also: ["Components"](#)

Attach the U-Bracket to the vehicle, making sure it does not impede safe operation of the vehicle.



Attach the Passive Cradle to the U-Bracket using the Angle Adjust knobs.
Use both knobs to loosen and tighten the cradle to the U-bracket while determining the best viewing angle.

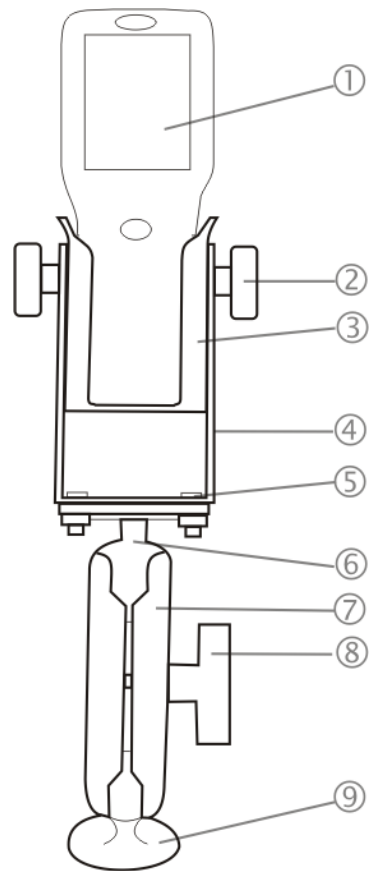


The passive vehicle mounted cradle is ready for use.

Periodically test the mounting device and tighten bolts and/or knob as needed.

If the cradle becomes cracked or warped it must be replaced before the cradle is put back in service.

Install the RAM Bracket



1. MX7
2. Angle Adjust Knobs
3. Passive Cradle
4. U-Bracket
5. Mounting Hex Bolt
6. Upper RAM Ball Assembly
7. Arm
8. Thumbscrew
9. Lower RAM Ball Assembly

1.	Attach the lower RAM ball assembly to the vehicle, making sure it does not impede safe operation of the vehicle.
2.	Fasten the upper RAM ball assembly to the base of the U-bracket using the supplied bolts, washers and screws.
3.	Loosen the turnscrew on the RAM arm, place the lower socket over the vehicle mount RAM ball, then the other arm socket over the RAM ball on the U-bracket.
4.	Tighten the arm turnscrew until the U-bracket is secured to the RAM arm and the vehicle.
5.	Attach the Passive Cradle to the U-Bracket using the Angle Adjust knobs. Use both knobs to loosen and tighten the cradle to the U-bracket while determining the best viewing angle.

The passive vehicle mounted cradle is ready for use.

Periodically test the mounting device and tighten bolts and/or knob as needed. If the cradle becomes cracked or warped it must be replaced.

Cleaning

Do not use paper towels or harsh-chemical-based cleaning fluids since they may result in damage to the surfaces and/or battery connectors.

Use a clean soft cloth to wipe any dirt, moisture or grease from the MX7, charging contacts or the passive cradle. Do not use any liquid to clean the cradle. Spray or dampen the cleaning cloth with the liquid/spray. If possible, clean only those areas which are soiled. Lint/particulates can be removed from the connectors and docking pockets with clean, filtered canned air.

Chapter 4: Powered Vehicle Mount Cradle

Overview

Vehicle mounted cradles and brackets are specifically designed for vehicle mount applications. The vehicle mounted assembly restrains the MX7 and isolates it from shock and vibration.

Overhead, dash and roof support pillar mounting is via a RAM Mount accessory which includes all the hardware and squeeze plates required for vehicle mounting. Multiple attachment points for the RAM ball mechanism are located on the vehicle cradle.

In most cases, disconnect any power and peripheral cables from the MX7 before it is secured in the vehicle mounted assembly.

Never put the MX7 into the vehicle mounted assembly until the assembly is securely fastened to the vehicle.

The MX7 must have a main battery installed when it is docked in a vehicle mounted cradle.

The main battery in the MX7 is recharged when the MX7 is docked in a powered vehicle cradle.

Preparing the Powered Vehicle Mounted Cradle for Use

The powered vehicle mounted assembly should be secured to an area in the vehicle where it:

- Does not obstruct the driver's vision or safe vehicle operation.
- Will be protected from rain or inclement weather.
- Will be protected from extremely high concentrations of dust or wind-blown debris.
- Can be easily accessed by a user seated in the driver's seat while the vehicle is not in operation.
- There must be enough clearance at the back of the cradle to accept an MX7 with a trigger handle.
- There must be at least 2" clearance at the back of the vehicle cradle for power, serial interface and the MX7 Input/Output cables.

Quick Start

The following list outlines, in a general way, the process to follow when preparing the MX7 powered vehicle mounted cradle for use. Refer to the following sections in this document for more details.

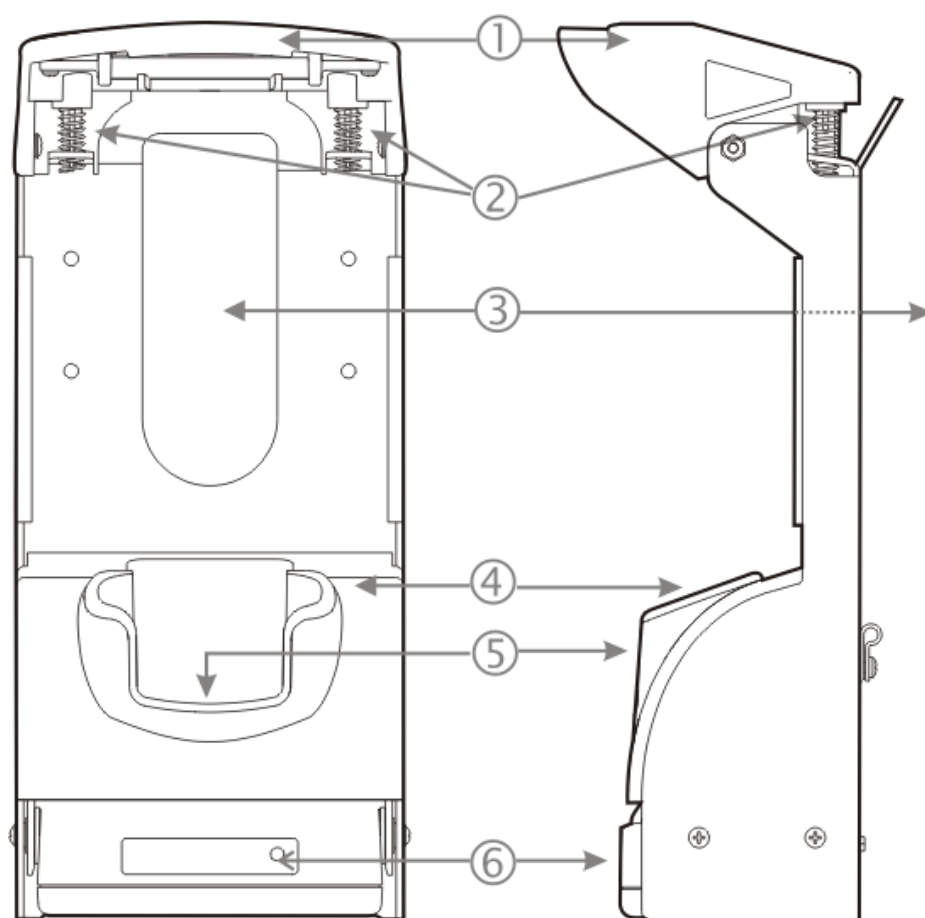
1. Attach the [vehicle mounting assembly to the vehicle](#).
2. Attach the [cradle assembly](#) to the vehicle mounting assembly.
3. Secure the MX7 [in the mounted vehicle cradle](#).
4. Adjust the MX7 to the best viewing angle.
5. Connect [peripheral cables](#).
6. Secure the DC/DC or 12 VDC [power connector](#) from the vehicle mounted power supply to the Power port.
7. Secure all cables in [strain relief cable clamps](#).

The MX7 in the powered vehicle mounted assembly is ready for use.

Components

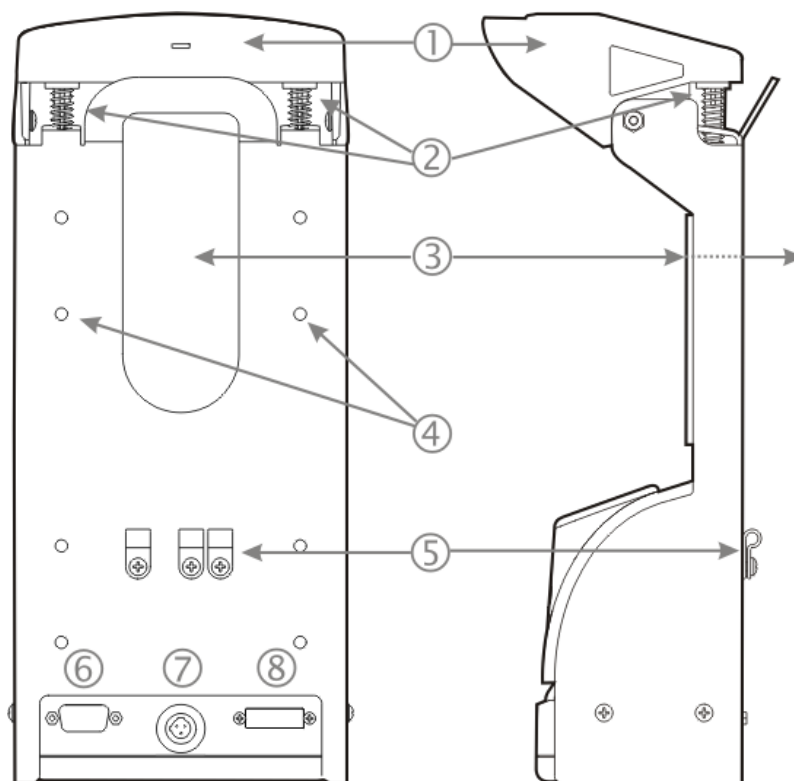
Before installation begins, verify you have the applicable vehicle mounting bracket assembly components necessary for your mount type.

Front



1	Retainer
2	Retainer Springs
3	Handle Opening
4	Vehicle Cradle Adapter Cup
5	Charging Pocket
6	MX7 Docked LED

Back



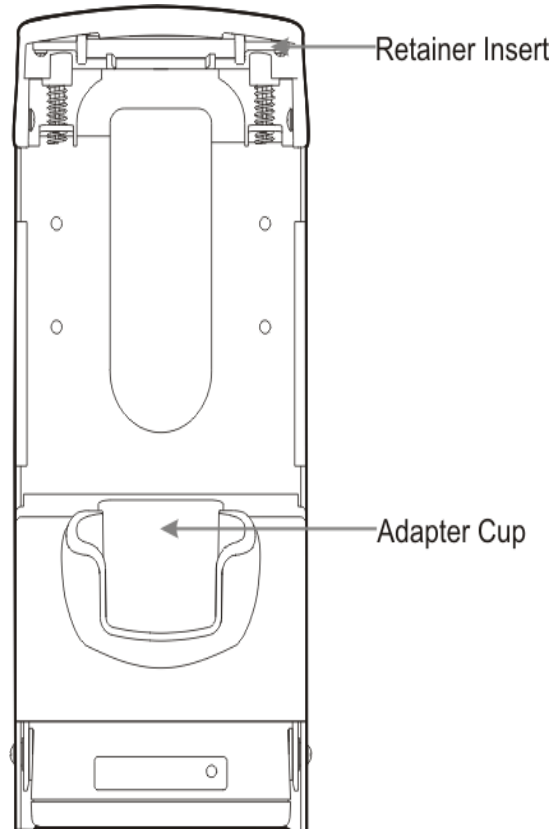
1	Retainer
2	Retainer Springs
3	Handle Opening
4	RAM Bracket Mounting Locations
5	Strain Relief Cable Clamps
6	Serial Interface Port
7	Power Connector
8	MX7 I/O Port

Install / Remove Vehicle Cradle Adapter Cup and Top Adapter

Equipment Required – Phillips screwdriver and torquing tool (not supplied by Honeywell). You will need a torquing tool capable of torquing up to 6 in/lb (+/- .5 in/lb) for the cradle adapter cup.

Install or remove the adapter on a clean, well-lit stable surface.

The vehicle cradle is shipped with the cradle Adapter Cup and Retainer Insert pre-installed.

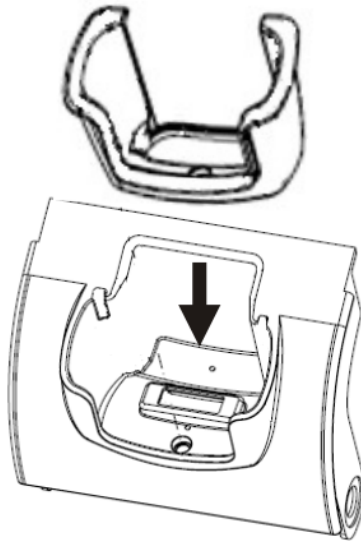


The MX7 cradle charging pocket, without a cradle adapter cup and top adapter, is designed for an MX7 with a rubber boot (MX7490BOOT or MX7491BOOT) enclosing/protecting the MX7.

Before docking an MX7 without a rubber boot in the vehicle cradle, re-install the vehicle cradle [Adapter Cup](#) and [Retainer Cap Insert](#).

Install Adapter Assembly

Charging Pocket Adapter Cup

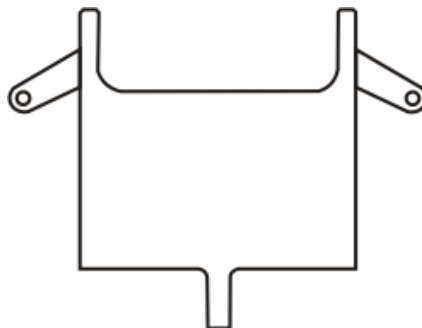


The adapter cup is installed facing in one direction.

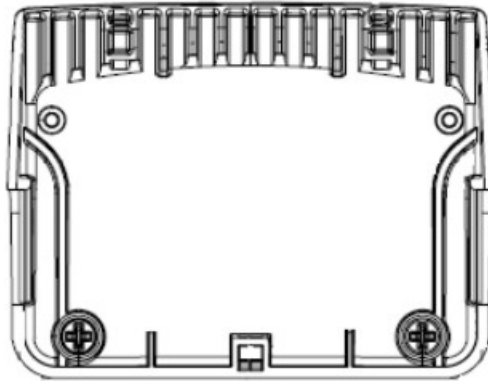
1. Slip the adapter cup into the cradle charging pocket, aligning the screw hole in the adapter cup with the screw hole in the charging bay.
2. Using a torquing screwdriver, insert the screw in the adapter cup screw hole, and torque the screw to 6 in/lbs +/- .5 in/lbs.

Retainer Insert

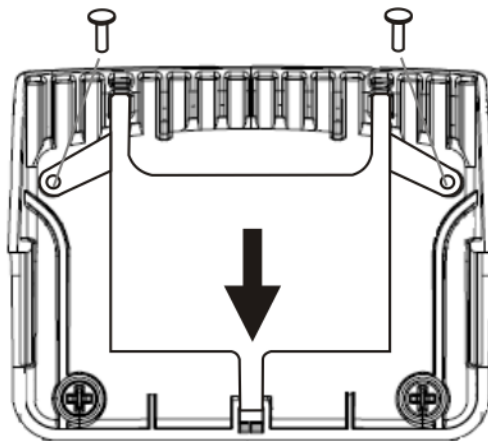
The Retainer Insert has three tabs.



1. Lay the flat side of the Retainer Insert against the underside of the Retainer cap, show below.



1. The Retainer Insert back tab slides into the slot at the back of the Retainer.



1. The Retainer Insert is fastened to the Retainer cap using screws and the pre-drilled holes in the angled tabs (one on each side).
2. The Retainer Insert is secured in place with two screws (the screws do not require a torquing tool).

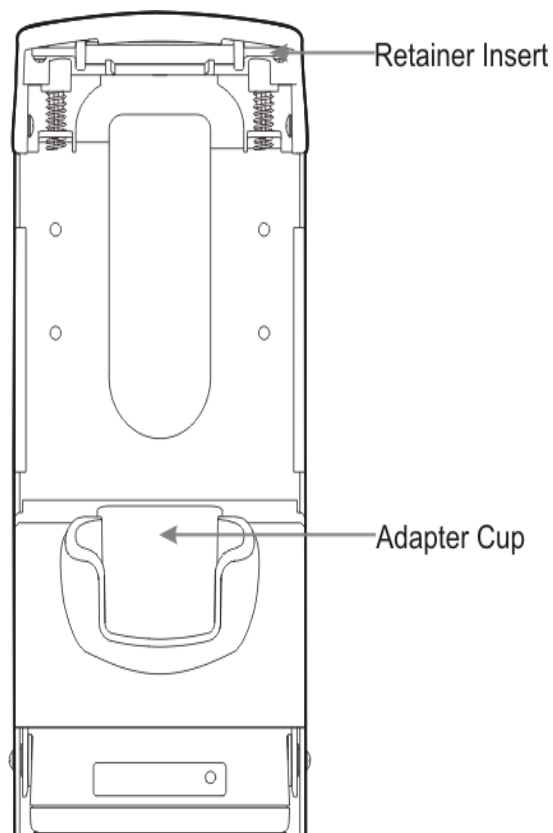
Periodically check the connection of the adapter cup and re-torque if necessary.

Periodically check the Retainer Insert connection and re-tighten if necessary.

Remove Adapter Assembly

1. Remove the adapter cup by unscrewing the single captive screw at the front of the adapter cup.
2. Remove the Retainer Cap Insert by unscrewing the two screws holding it to the Retainer. Slide the tab out of the slot in the back of the Retainer assembly.
3. Place the screws, adapter cups and the Retainer Cap Insert in a protected, safe place until needed.

If the adapter cup or retainer insert are cracked or broken, they must be replaced before a powered vehicle cradle, with an adapter cup and Retainer Cap Insert, is placed into service.



RAM Bracket Mounting

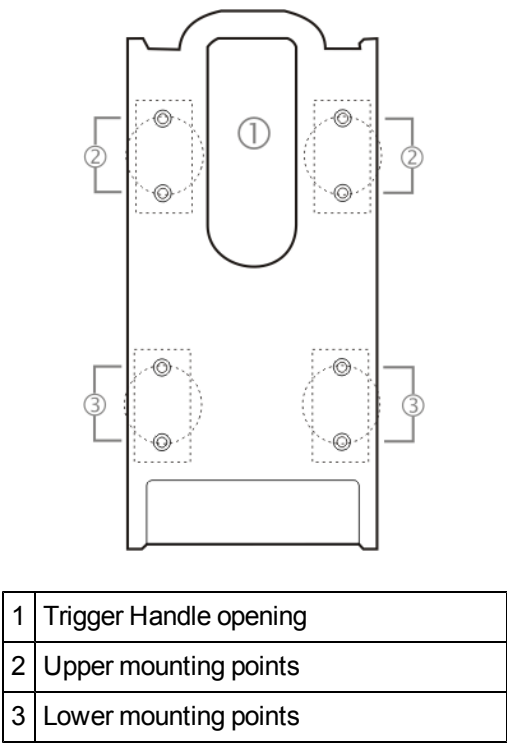
RAM Bracket Assembly mounting holes are on the back of the cradle. The mounting screws fit in Pim nuts and are automatically secured.

The number of RAM balls attached to the back of the vehicle mount cradle are dependent upon the desired RAM mount configuration.

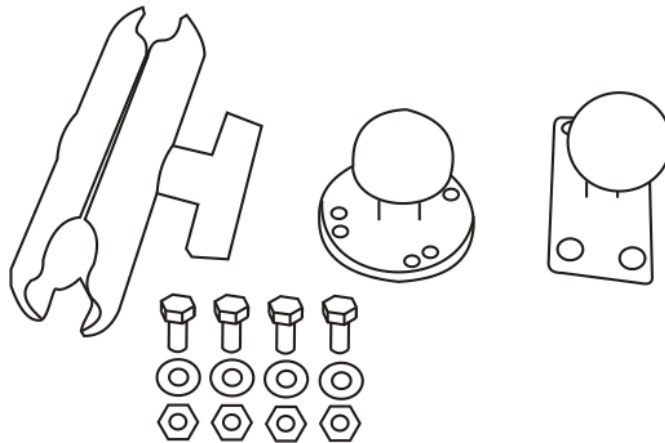
The figure shown below is an example *only*.

RAM ball mounting screws are included in the mounting kit. Contact [Technical Assistance](#) for the MX7 RAM Mount Kit for the vehicle cradle.

RAM Bracket Mounting Points



Vehicle Cradle RAM Ball Assembly

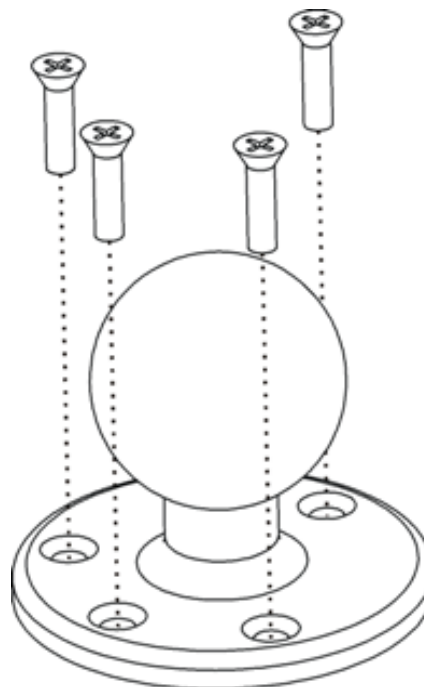
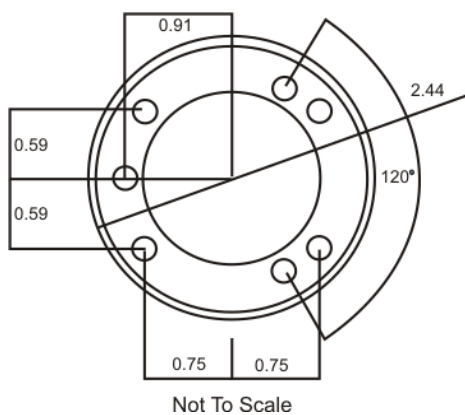


1. Fasten the RAM ball with the circular mounting base (shown in the middle in above photo) to the vehicle.
2. Fasten the RAM ball with the rectangular mounting base (shown on the right in above photo) to the back of the vehicle cradle .
3. Loosen the knob on the squeeze arm (shown on the left in above photo).
4. Place either RAM ball opening in the squeeze arm over the vehicle mounted RAM ball.
5. Place the remaining RAM ball opening over the vehicle cradle mounted RAM ball.
6. Tighten the knob on the squeeze arm until the vehicle cradle is secured to the vehicle.

Adjust the position of the secured vehicle cradle by slightly loosening the squeeze arm knob, rotating the cradle and then re-tightening the squeeze arm knob.

Periodically test the mounting device and re-tighten bolts, RAM balls and/or squeeze arm adjustment knob as needed.

RAM Circular Base Footprint



Not To Scale



Bolts, washers and nuts for mounting the RAM ball to the vehicle are supplied by Honeywell.

Qty 4 – Hex Cap 1/4-20 x 3/4 bolts

Qty 4 – 1/4 flat washer

Qty 4 – 1/4-20 nylon insert lock nuts

Note: Mount to the most rigid surface available.

DC to DC Power Supply Installation

For use with Honeywell power supplies:

- 9000301PWRSPPLY – Power Supply, 18-60VDC with cable
- 9000302PWRSPPLY – Power Supply, 60-110VDC with cable

Connecting Electrical Cables to Power Sources

The DC to DC power supply is used to provide vehicle power to the MX7 when placed in a DC powered vehicle dock.

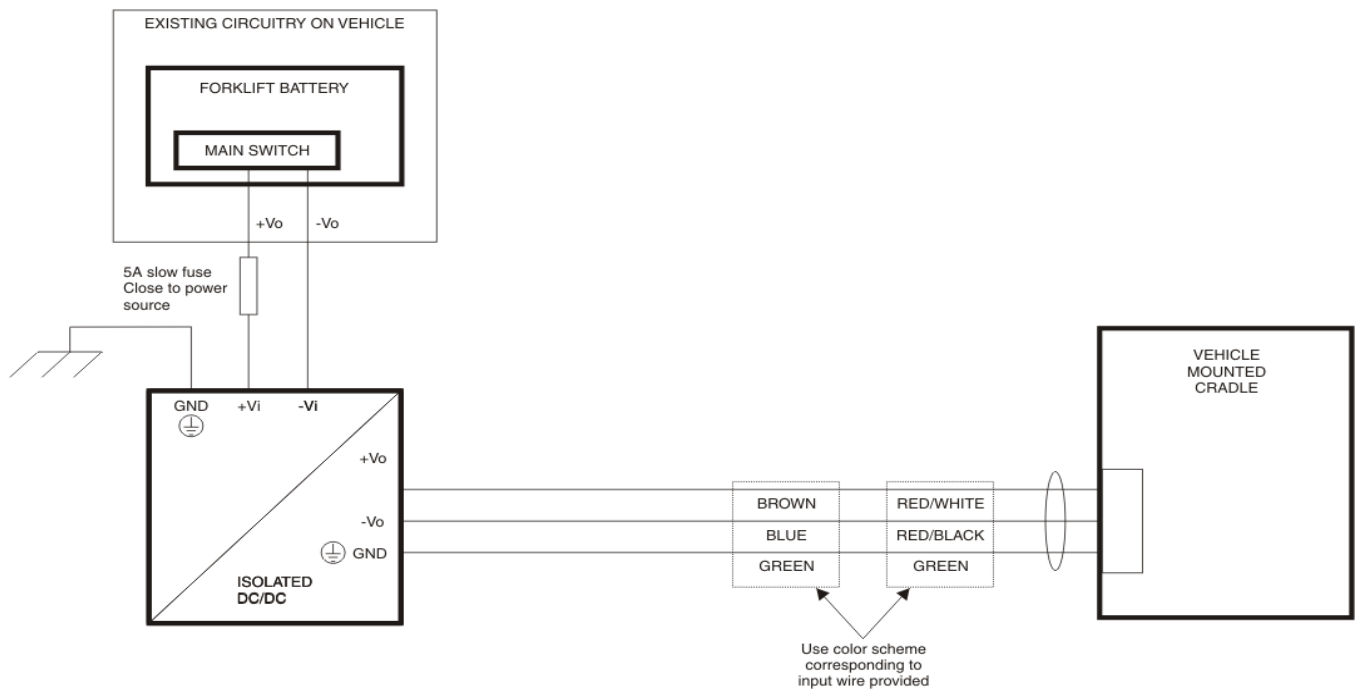
Specifications for Electrical Supply

Input Voltage	Always observe input voltage range specified on the DC to DC power supply.
Output Voltage	12 VDC $\pm$ 10%
Power	50 W
Fuse	5 A (slow blow fuse). Fuses are USER SUPPLIED

Note: Refer to the [Wiring Schematic](#) for wiring colors and connections.

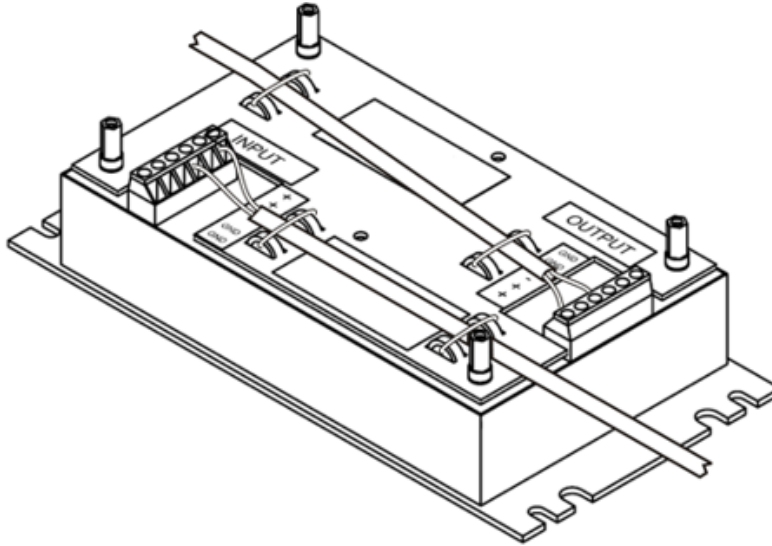
Caution: 	For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. This fused circuit requires a five Amp maximum time delay (slow blow) high interrupting rating fuse. If the supply connection is made directly to the battery, the fuse should be installed in the positive lead within 5 inches of the battery positive (+) terminal. Note: For North America, a UL Listed fuse is to be used.
Caution: 	For installation by trained service personnel only.

Wiring Schematic



How To Connect Vehicle Electrical Connection

1. The vehicle cradle must be empty.
2. Begin by connecting the power cable to the MX7's vehicle cradle. Work from this connection with the last connection being to the vehicle's power source.
3. Route the cable from the cradle to the DC to DC converter.
4. Cut the cable to length and strip the wire ends. Route the power cable the shortest way possible. The cable is rated for a maximum temperature of 105°C (221°F). When routing this cable it should be protected from physical damage and from surfaces that might exceed this temperature. Do not expose the cable to chemicals or oil that may cause the wiring insulation to deteriorate. Always route the cable so that it does not interfere with safe operation and maintenance of the vehicle.
5. Remove the DC to DC converter lid screws. Put them in a safe place.
6. Remove the lid from the DC to DC converter.
7. Attach the stripped wire ends to the **output** side of the DC to DC converter.
8. Attach the stripped wire ends to the **input** side of the DC to DC converter.
9. The input and output blocks each have two + plus and two – minus connectors. Either connector in the block can be used to connect the matching polarity wire. The input and output blocks also each have two chassis ground connections. When connecting the MX7 cradle to vehicle power, use one chassis ground connector in each block.



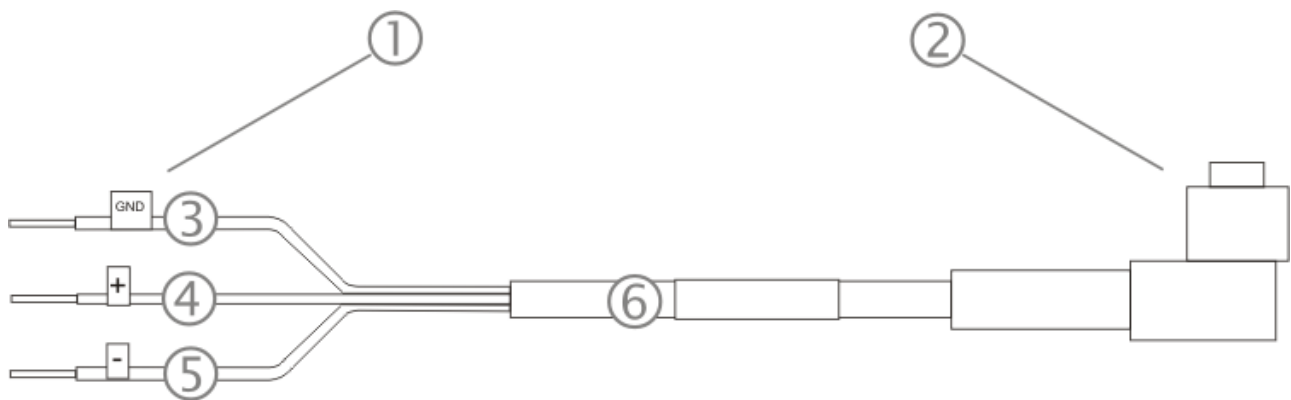
10. Wire colors depend on the type of device attached. Please refer to [this illustration](#) for wire colors.
11. Use the looms and wire ties to secure all wiring as shown above, then reattach the cover with the screws.
12. Connect the DC to DC converter to the vehicle's electrical system.
13. While observing the fuse requirements specified [here](#), connect the power cable as close as possible to the actual battery terminals of the vehicle. When available, always connect to unswitched terminals in the vehicle fuse panel, after providing proper fusing.
Note: ATTENTION: For uninterrupted power, electrical supply connections should not be made at any point after the ignition switch of the vehicle.
14. Use proper electrical and mechanical fastening means for terminating the cable. Properly sized “crimp” type electrical terminals are an accepted method of termination. Please select electrical connectors sized for use with 18AWG (1mm²) conductors.
15. Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate the outer cable jacket.

Vehicle 12V Bare Wire Adapter

Part Number: 9000A079CBL12ML3

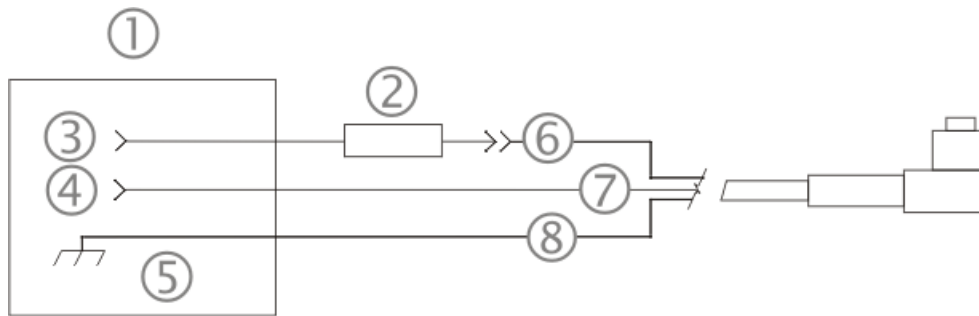
Caution: 	For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. This fused circuit requires a ten Amp maximum time delay (slow blow) high interrupting rating fuse. If the supply connection is made directly to the battery, the fuse should be installed in the positive lead within 5 inches of the battery positive (+) terminal. Note: For North America, a UL Listed fuse is to be used.
Caution: 	For installation by trained service personnel only.

Vehicle Cable Connection Cable (Fuse Not Shown)



- 1. To Vehicle Battery
- 2. To Vehicle Mounted Device
- 3. Green (GND)
- 4. Brown (DC+)
- 5. Blue (DC-)
- 6. 12 VDC

Connecting the Power Cable to the Vehicle



1. Vehicle Electrical System
2. 10 Amp Slow Blow Fuse
3. DC +
4. DC -
5. Vehicle Chassis
6. Brown
7. Blue
8. Green

Note: Correct electrical polarity is required for safe and proper installation. The cradle will not power on or function if the cable is connected with the polarity reversed. See the following figure titled “Vehicle Connection Wiring Color Codes” for additional wire color-coding specifics.

How To: Connect Vehicle 12 VDC Connection

1. The power cable must be UNPLUGGED from the MX7 vehicle cradle.
2. While observing the fuse requirements specified above, connect the power cable as close as possible to the actual battery terminals of the vehicle. When available, always connect to unswitched terminals in the vehicle fuse panel, after providing proper fusing.

ATTENTION: For uninterrupted power, electrical supply connections should not be made at any point after the ignition switch of the vehicle.

3. Route the power cable the shortest way possible. The cable is rated for a maximum temperature of 105°C (221°F). When routing this cable it should be protected from physical damage and from surfaces that might exceed this temperature. Do not expose the cable to chemicals or oil that may cause the wiring insulation to deteriorate.

Always route the cable so that it does not interfere with safe operation and maintenance of the vehicle.

Use proper electrical and mechanical fastening means for terminating the cable. Properly sized “crimp” type electrical terminals are an accepted method of termination. Select electrical connectors sized for use with 18AWG (1mm²) conductors.

Wiring color codes for Honeywell supplied DC input power cabling:

Vehicle Supply		Wire Color
+12 VDC	DC +	Brown
Return	DC -	Blue
Vehicle Chassis	GND	Green

4. Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate outer cable jacket.
5. Refer to the following sections to complete the power connection to the MX7 vehicle cradle.

Connect Power Supply to Vehicle Cradle

The power cable connector is L-shaped.

The long end of the L (the cable) will be facing up towards the middle strain relief cable clamp.

Align the connector pins to the vehicle cradle Power connector; firmly pushing the connector into the Power port.

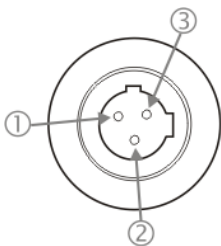
Tighten the nut of the plug clockwise until the power cable is securely fastened.

Secure the cable to the cradle with the strain relief cable clamp (see section titled [Vehicle Cradle Strain Relief Cable Clamp](#)).

The power LED on the MX7 illuminates when it is receiving external power and the MX7 is docked.

Cradle Power Connector Port

Note: When an external power supply is used to power this cradle, the external power supply should be UL Listed, with LPS or Class 2 outputs rated 12V, minimum 2 Amps.



Pin	Signal	Wire Color
1	Ground (CG)	Green
2	Return (-)	Blue
3	+12V (+)	Brown

Attach a Serial or I/O Connector

The serial cable is connected to the port labeled **Serial Interface** on the back of the vehicle cradle.

The serial cable can originate with a tethered scanner, a desktop/laptop PC, a printer or another serial device.

The I/O connector cable is connected to the port (male) labeled **MX7 I/O Port** on the [back of the vehicle cradle](#).

Periodically test the connections for stability and re-tighten if necessary.

Serial Interface

Align the RS232 serial cable end (female) carefully to the **Serial Interface** port (male) at the back of the cradle. Firmly press the ends together and finger tighten the screws on either side of the connector. Test the connection for stability.

Secure the cable to the cradle with the installed strain relief cable clamp (see section titled [Vehicle Cradle Strain Relief Cable Clamp](#)) for instruction.

I/O Port

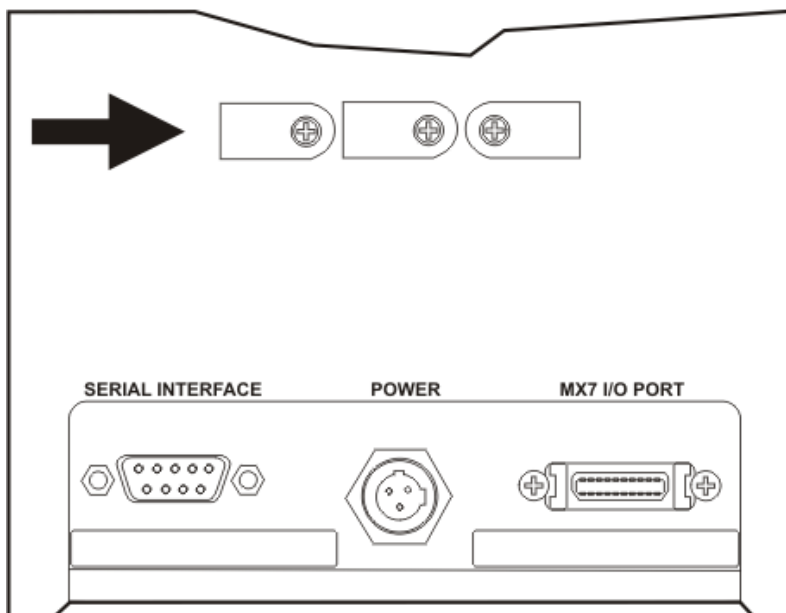
Squeeze the clips next to the connector attached to the I/O cable to open the catches in the connector assembly. Firmly press the cable end (female) into the **I/O Port** connector (male) at the back of the cradle. Release the clips in the connector cable. Test the connection for stability.

Secure the cable to the cradle with the installed strain relief cable clamp (see section titled [Vehicle Cradle Strain Relief Cable Clamp](#)) for instruction.

Vehicle Cradle Strain Relief Cable Clamp

Equipment Required: Phillips screwdriver (not supplied by Honeywell)

There are three strain relief cable clamps secured to the back of the vehicle cradle, located above the ports for the **Serial Interface**, **Power** and **MX7 I/O** connections.



1. Remove the strain relief cable clamp from the back of the cradle by turning the screw counterclockwise. Put the screw aside in a safe location.
2. Slide the strain relief clamp over the cable.
3. Using a Phillips screwdriver and the screw that was removed, refasten the clamp holding the cable to the vehicle cradle. Do not stretch the cable. Leave enough slack in the cable to allow the cable to be connected and disconnected from the MX7 easily when needed.
4. Continue in this manner until all cables are secured to the back of the vehicle cradle.

Vehicle Cradle LED

The cradle LED is located at the front center of the cradle.

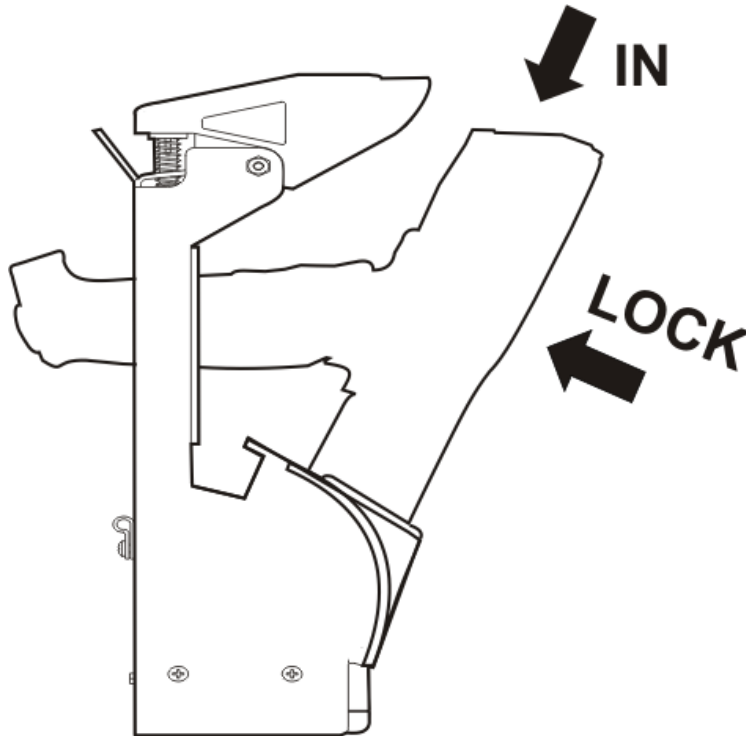
When Cradle LED is ...	It means
 Off	MX7 is docked. Cradle does not have power. MX7 is not docked. Cradle may have power. Check the power connector at the back of the cradle.
 Red	MX7 is docked and external power is connected.

Dock MX7 in Cradle

Note: Do not put the MX7 into the vehicle cradle until the cradle is securely fastened to the vehicle.

The MX7 is inserted into the cradle by pressing the base of the MX7 down into the cradle pocket until the connector at the base of the MX7 clicks into place with the charging connector at the bottom of the docking well. If the cradle is connected to a power source, the Docked LED illuminates.

Firmly press the MX7 backward until the Retainer snaps forward, its latches catching on the front of the MX7, securing it in the cradle.

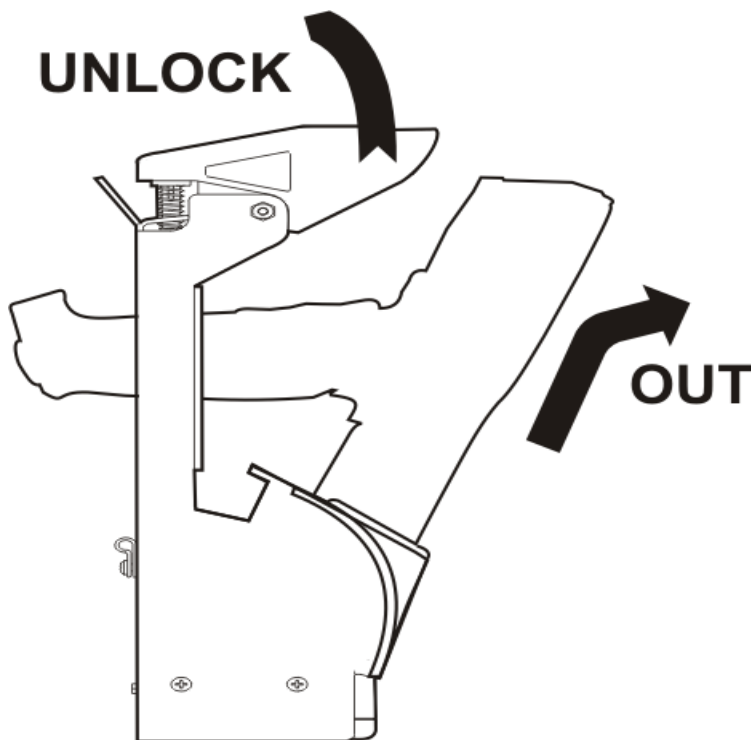


Always put the handle through the Handle Opening first or damage to the scanner aperture may occur.

Do not slam the MX7 into the cradle pocket. Damage to the cradle and MX7 components may occur. If the vehicle cradle or MX7 is damaged, it must be removed from service and repaired before placing it into service again.

Remove MX7 from the Vehicle Cradle

The MX7 is removed from the vehicle cradle by pushing the front of the Retainer up and back until the MX7 is released from the Retainer latches and the charging pocket swings forward.



Pull the MX7 up and out of the vehicle cradle pocket, disconnecting the MX7 from the charge/communication port at the base of the docking bay. The Docked LED turns off.

Maintenance - Vehicle Mounted Devices

There are no serviceable parts in the vehicle cradles. Do not attempt to open the units.

If the vehicle mounting hardware and cradle connections become broken, loose or cracked, the assembly must be taken out of service and replaced.

Cleaning

Do not use paper towels or harsh-chemical-based cleaning fluids since they may result in damage to the surfaces and/or battery connectors.

Use a clean soft cloth to wipe any dirt, moisture or grease from the MX7, charging contacts or the vehicle mounted cradle. Do not use any liquid to clean the cradle, battery pack, MX7, or charging terminals (pins). Spray or dampen the cleaning cloth with a cleaning liquid. If possible, clean only those areas which are soiled. Lint/particulates can be removed from the connectors and charging pockets with clean, filtered canned air.

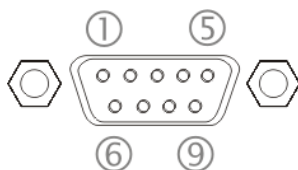
Specifications

MX7 Powered Vehicle Cradle

Weight	2 lbs. 15.2 oz / 1.34 kg
Dimensions	Height 12.5 in. (31.8 cm) Width 6.0 in. (15 cm) Depth 5.0 in. (13 cm)
Operating Temperature	14° F to 122° F (-10° C to 50° C)
Storage Temperature	-4° F to 158° F (-20° C to 70° C)
Humidity	5% to 90% (non-condensing) at 104° F / 40° C

Vehicle Cradle Port Pinout

MX7 Desktop and Vehicle Cradle Serial Port



The connector is industry-standard RS232 and is a PC/AT standard 9-pin D male connector.

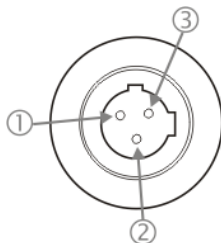
Note: Tethered scanners must be connected to powered cradles.

Pin	Signal	Description
1	DCD	Data Carrier Detect
2	RXD	Received Data – Input
3	TXD	Transmitted Data – Output
4	DTR	Data Terminal Ready
5	GND	Signal/Power Ground
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear To Send
9	RI or Power	+5 VDC sourced by the Cradle

Note: Pin 9 of this port is connected to +5 VDC and only approved Honeywell cables are to be used for communication between the cradle and external devices.

Power Connector Port

Note: When an external power supply is used to power these products, the external power supply should be UL Listed, with LPS or Class 2 outputs rated 12V, minimum 2 Amps.



Cradle Power Connector Port Pinout

Pin	Signal	Wire Color
1	Ground (CG)	Green
2	Return (-)	Blue
3	+12V (+)	Brown

The Power connector is located on the back of the vehicle cradle.

Chapter 5: Technical Assistance

If you need assistance installing or troubleshooting your device, please contact us by using one of the methods below:

Knowledge Base: www.hsmknowledgebase.com

Our Knowledge Base provides thousands of immediate solutions. If the Knowledge Base cannot help, our Technical Support Portal (see below) provides an easy way to report your problem or ask your question.

Technical Support Portal: www.hsmsupportportal.com

The Technical Support Portal not only allows you to report your problem, but it also provides immediate solutions to your technical issues by searching our Knowledge Base. With the Portal, you can submit and track your questions online and send and receive attachments.

Web form: www.hsmcontactsupport.com

You can contact our technical support team directly by filling out our online support form. Enter your contact details and the description of the question/problem.

Telephone: www.honeywellaidc.com/locations

For our latest contact information, please check our website at the link above.

Product Service and Repair

Honeywell International Inc. provides service for all of its products through service centers throughout the world. To obtain warranty or non-warranty service, please visit www.honeywellaidc.com and select **Support > Contact Service and Repair** to see your region's instructions on how to obtain a Return Material Authorization number (RMA #). You should do this prior to returning the product.

Limited Warranty

Honeywell International Inc. ("HII") warrants its products to be free from defects in materials and workmanship and to conform to HII's published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any HII product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of (A) modification or alteration by the purchaser or other party, (B) excessive voltage or current supplied to or drawn from the interface connections, (C) static electricity or electro-static discharge, (D) operation under conditions beyond the specified operating parameters, or (E) repair or service of the product by anyone other than HII or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by HII for the product at the time of purchase ("Warranty Period"). Any defective product must be returned (at purchaser's expense) during the Warranty Period to HII factory or authorized service center for inspection. No product will be accepted by HII without a Return Materials Authorization, which may be obtained by contacting HII. In the event that the product is returned to HII or its authorized service center within the Warranty Period and HII determines to its satisfaction that the product is defective due to defects in materials or workmanship, HII, at its sole option, will either repair or replace the product without charge, except for return shipping to HII.

EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

HII'S RESPONSIBILITY AND PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO EVENT

SHALL HII BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF HII ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO HII FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN HII MAY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not provided by the manufacturer may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. HII extends these warranties only to the first end-users of the products. These warranties are non-transferable.

The duration of the limited warranty for the MX7 is 1 year.

The duration of the limited warranty for the MX7 Desktop Cradle is 1 year.

The duration of the limited warranty for the MX7 Vehicle Cradle is 1 year.

The duration of the limited warranty for the MX7 Passive Vehicle Cradle is 1 year.

The duration of the limited warranty for the MX7 Tecton Battery Charger is 1 year.

The duration of the limited warranty for the MX7 2200mAh Li-Ion and 1250mAh Li-Ion Battery is 6 months.

The duration of the limited warranty for the MX7 AC power supply and cables is 1 year.

The duration of the limited warranty for the MX7 DC-DC Converter and cable is 1 year.

The duration of the limited warranty for the MX7 cables (USB, Serial, Communication, Power) is 1 year.

The duration of the limited warranty for the MX7 fabric accessories (e.g., belt, case, holster) is 90 days.

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